



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-3-B1 BYPASS RATIO: 5.1
 UNIQUE ID NUMBER: 1CM004 PRESSURE RATIO (π_{00}): 22.4
 COMBUSTOR: RATED THRUST (F_{00}) (kN): 89.4
 ENGINE TYPE: TF

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	7.2	89.5	46.7	5.1
AS % OF ORIGINAL LIMIT	36.7	75.8	55.0	21.1
AS % OF CAEP/2 LIMIT (NO _x)			68.8	
AS % OF CAEP/4 LIMIT (NO _x)			85.1	
AS % OF CAEP/6 LIMIT (NO _x)			96.7	
AS % OF CAEP/8 LIMIT (NO _x)			118.3	

DATA STATUS

- PRE-REGULATION
 - CERTIFICATION
 x REVISED (SEE REMARKS)

TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES
 - DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 x OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	0.946	0.04	0.90	17.70	4.0
CLIMB OUT	85	2.2	0.792	0.05	0.95	15.50	2.5
APPROACH	30	4.0	0.290	0.08	3.80	8.30	2.5
IDLE	7	26.0	0.114	2.28	34.40	3.90	2.2
LTO TOTAL FUEL (kg) or EMISSIONS (g)			392	418	6517	3595	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX)				4.7	72.9	40.3	4.0
SIGMA (D _p /F ₀₀ in g/kN, or SN)				0.5	5.1	0.8	0.6
RANGE (D _p /F ₀₀ in g/kN, or SN)				4.17-5.22	68.5-78.5	39.6-41.2	3.4-4.5

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	96-97.5
TEMPERATURE (K)	279-286
ABS HUMIDITY (kg/kg)	0.002-0.009

FUEL

SPEC	Jet A
H/C	1.93
AROM (%)	16

MANUFACTURER: CFM International
 TEST ORGANIZATION: CFM56 Evaluation Engineering
 TEST LOCATION: Peebles Site IVD
 TEST DATES: 11/11/1983-14/11/1983

REMARKS

1. Ref GE Report R84AEB245.
2. Engine S/N 692441.
3. Revised based on 3/89 production cycle.
4. Data also apply to CFM56-3C-1 and -3B-2 engines related to 89.4 kN (20,100 Lb) thrust for B737-300 aircraft.

Compliance with Fuel Venting requirements: - ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)